



[7590-01-P]

## **NUCLEAR REGULATORY COMMISSION**

**[Docket Nos. 72-30, 50-309, and 72-1015; NRC-2019-0116]**

### **Maine Yankee Atomic Power Company; Independent Spent Fuel Storage Installation**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Exemption; safety evaluation and environmental assessment with finding of no significant impact; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing four exemptions requested by Maine Yankee Atomic Power Company (Maine Yankee). The requested exemptions are from NRC regulations that require compliance with the terms, conditions, and specifications of Certificate of Compliance (CoC) No. 1015 for the NAC-UMS<sup>®</sup> spent fuel storage system at Maine Yankee's Independent Spent Fuel Storage Installation (ISFSI). Maine Yankee currently stores sixty NAC-UMS<sup>®</sup> System canisters under Amendment No. 5 to CoC No. 1015. In order to adopt Amendment No. 6 to CoC No. 1015, Maine Yankee is requesting the reissuance of the four previously approved exemptions.

**DATES:** The environmental assessment (EA) and finding of no significant impact (FONSI) referenced in this document are available on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The exemption takes effect on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Please refer to Docket ID **NRC-2019-0116** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2019-0116**. Address questions about docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents Collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

**FOR FURTHER INFORMATION CONTACT:** Torre Taylor, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-7900; e-mail: [Torre.Taylor@nrc.gov](mailto:Torre.Taylor@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Background**

Maine Yankee is a general licensee under part 72 of title 10 of the *Code of Federal Regulations* (CFR). Maine Yankee stores spent nuclear fuel in accordance with the requirements of CoC No. 1015 for the NAC-UMS<sup>®</sup> System. Section 72.210, “General license issued,” establishes a general license to store spent nuclear fuel in an ISFSI at reactor sites licensed under 10 CFR part 50; Maine Yankee holds Facility Operating License No. DPR 36 under 10 CFR part 50. Section 72.212, “Conditions of general license issued under § 72.210,” provides the conditions for use of a general license. Section 72.212(b)(3) limits the storage of spent fuel to the approved casks listed in § 72.214. Casks are approved for storage under the conditions specified in the respective CoCs. The NRC approved the use of the NAC-UMS<sup>®</sup> System by issuing CoC No. 1015, effective November 20, 2000. NRC regulations require users to comply with the terms and conditions of the CoC including, but not limited to, the associated technical specifications. The requested exemptions would allow Maine Yankee to deviate from certain requirements of the NAC-UMS<sup>®</sup> System CoC No. 1015, Amendment No. 6, as discussed in this document.

## **II. Request/Action**

Maine Yankee is requesting the reissuance of four exemptions from the terms and conditions of Amendment No. 6 to CoC No. 1015 that were previously approved for Amendment No. 5 to CoC No. 1015. Maine Yankee submitted its request by letter dated January 21, 2019, supplemented by letter dated April 11, 2019. Maine Yankee requested specific exemptions from the requirements in 10 CFR 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), 72.212(b)(11), and 72.214, with regard to certain terms and conditions of Appendices A and B to the technical specifications of Amendment No. 6 to CoC No. 1015 detailed below.

Maine Yankee stated that adoption of the exemptions would not result in any impact to the safe storage of the spent fuel at the ISFSI and will not increase the probability or consequences of an accident.

The four exemptions are:

1. Appendix A, Section A.3.1.4, Canister Maximum Time in Transfer Cask. This exemption is from the requirement to comply with the 25-day requirement in Limiting Condition of Operation 3.1.4 for canister, NAC-UMS-TSC-790-016.
2. Appendix A, Section A.5.1, Training Program. This exemption is from the requirement to develop a systematic approach to training that includes comprehensive instructions for the operation and maintenance of the ISFSI, except for the NAC-UMS<sup>®</sup> System.
3. Appendix A, Section A.5.5, Radioactive Effluent Control Program. This exemption is from the requirement to submit an annual report pursuant to 10 CFR 72.44(d)(3) or 10 CFR 50.36(a).
4. Appendix B, Section B.3.4.2.6. This exemption is from the requirement to maintain a coefficient of friction on the ISFSI pad surface of at least 0.5.

The requests for an exemption from the requirements of Appendix A, Section A.5.1., Training Program, and Appendix A., Section A.5.5., Radioactive Effluent Control Program, are categorically excluded from further environmental review in accordance with 10 CFR 51.22(c)(25)(i-v) and (vi)(B) and (E). In accordance with the requirements in 10 CFR part 51, the NRC prepared an environmental assessment that addresses the remaining two exemptions.

### **III. Discussion**

#### **Safety Evaluation**

Pursuant to 10 CFR 72.7, "Specific exemptions," the Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations of 10 CFR part 72 as it determines are

authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

*Authorized by Law*

The requested exemptions would allow the licensee to depart from certain requirements of CoC No. 1015, Amendment No. 6. Section 72.7 allows the NRC to grant exemptions from the requirements of 10 CFR part 72. Issuance of these exemptions are consistent with the Atomic Energy Act of 1954, as amended, and is not inconsistent with NRC regulations or other applicable laws. Therefore, the NRC has concluded that the exemptions are authorized by law.

*Will Not Endanger Life or Property or the Common Defense and Security*

The requested exemptions are the same exemptions as have been previously reviewed and approved by the NRC as discussed in this document. The NRC verified that there is no change in conditions under which the exemptions were previously approved. Therefore, the NRC has concluded that the exemptions will not endanger life or property, or the common defense and security.

*Otherwise in the Public Interest*

The requested exemptions are the same exemptions as have been previously reviewed and approved by the NRC as discussed in this document. Continuing to apply the exemptions would provide for consistent and efficient regulation of the NAC-UMS<sup>®</sup> System casks at the Maine Yankee ISFSI. Further, the alternative of denying the exemption request would impose an administrative burden on Maine Yankee and the NRC that would not provide a significant safety benefit. Therefore, the NRC has concluded that the exemptions are in the public interest.

*Review of the Requested Exemption*

The NRC reviewed the requested exemptions to verify that there were no differences from the previously approved exemptions. There are no changes in Amendment No. 6 to CoC No. 1015 that affect the terms and conditions from which Maine Yankee is requesting the exemptions. These terms and conditions are identical to the equivalent sections in Amendment No. 5. Each of the exemptions are discussed below.

1. Appendix A, Section A.3.1.4, Canister Maximum Time in Transfer Cask. This exemption is from the requirement to comply with the 25-day requirement in Limiting Condition of Operation 3.1.4 for canister, NAC-UMS-TSC-790-016. The exemption was approved by letter dated July 14, 2010, with the environmental assessment noticed in the *Federal Register* on June 15, 2010. The NRC's environmental assessment of this exemption is discussed in the *Environmental Assessment* section later in this document.

2. Appendix A, Section A.5.1, Training Program. This exemption is from the requirement to develop a systematic approach to training that includes comprehensive instructions for the operation and maintenance of the ISFSI, except for the NAC-UMS<sup>®</sup> System. This exemption was previously approved by letter dated January 4, 2005, with the environmental assessment noticed in the *Federal Register* on January 4, 2005. The exemption was approved again by letter dated July 14, 2010, with the environmental assessment noticed in the *Federal Register* on June 15, 2010.

This exemption would relieve Maine Yankee from the requirements to develop training modules under its systematic approach to training that include comprehensive instructions for the operation and maintenance of the ISFSI, except for the NAC-UMS<sup>®</sup> System. The NRC previously determined, as discussed in the *Federal Register* notice dated January 4, 2005, that Section A.5.1, "Training Program," would impose regulatory obligations with associated costs that do not provide a commensurate increase in safety. This exemption would allow Maine Yankee to have the training program limited to its

storage system. This exemption is categorically excluded from further environmental review in accordance with 10 CFR 51.22(c)(25)(i-v) and (vi)(E).

3. Appendix A, Section A.5.5, Radioactive Effluent Control Program. This exemption is from the requirement to submit an annual report pursuant to 10 CFR 72.44(d)(3) or 10 CFR 50.36(a). This exemption was previously approved by letter dated January 4, 2005, with the environmental assessment noticed in the *Federal Register* on January 4, 2005. The exemption was approved again by letter dated July 14, 2010, with the environmental assessment noticed in the *Federal Register* on June 15, 2010.

Licensees are required to submit an annual report to the Commission regarding effluents released into the environment pursuant to the requirements of 10 CFR 72.44(d)(3). The NRC previously determined, as discussed in the *Federal Register* notice dated January 4, 2005, that this annual report does not impact public safety because the NAC-UMS<sup>®</sup> System is a sealed and leak-tight spent fuel storage system. Therefore, there should not be any releases to the environment of either liquid or gaseous effluents from normal operation of the storage system. This exemption is categorically excluded from further environmental review in accordance with 10 CFR 51.22(c)(25)(i-v) and (vi)(B).

4. Appendix B, Section B.3.4.2.6. This exemption is from the requirement to maintain a coefficient of friction on the ISFSI pad surface of at least 0.5. This exemption was previously approved by letter dated February 1, 2004, with the environmental assessment noticed in the *Federal Register* on January 30, 2004. The exemption was approved again by letter dated July 14, 2010, with the environmental assessment noticed in the *Federal Register* on June 15, 2010.

Maine Yankee originally requested the exemption following the discovery of a winter icing condition at its ISFSI that created an indeterminate coefficient of friction between the vertical concrete casks and the ISFSI pad surface. The NRC determined that a specific coefficient of friction was not necessary. The NRC's environmental

assessment of this exemption is discussed in the *Environmental Assessment* section later in this document.

#### *Agencies and Persons Consulted*

The State of Maine reviewed Maine Yankee's request and, by letter dated January 29, 2019, stated that it has no objections to the request. The State of Maine explained that it sees Maine Yankee's request as an administrative change to maintain consistency with the canister manufacturer's Certificate of Compliance. A copy of this document will be provided to the State of Maine prior to publication in the *Federal Register*.

#### **Environmental Assessment**

*Identification of Proposed Action:* The proposed action is the granting of four previously approved exemptions from the requirements of 10 CFR 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), 72.212(b)(11), and 72.214. These sections of the NRC regulations require compliance with the terms, conditions, and specifications of the NAC-UMS<sup>®</sup> System CoC No. 1015 for spent fuel storage at Maine Yankee's ISFSI. This action will allow Maine Yankee to apply the changes authorized by Amendment No. 6 to CoC No. 1015 to the casks at Maine Yankee's ISFSI. Two of the four exemptions requested by Maine Yankee are categorically excluded from the requirement to conduct an environmental assessment, as discussed earlier in this document, and are not further discussed in this section. This environmental assessment discussion focuses on the two remaining exemptions:

1. Appendix A, Section A.3.1.4, Canister Maximum Time in Transfer Cask. This exemption is from the requirement to comply with the 25-day requirement in Limiting Condition of Operation 3.1.4 for canister, NAC-UMS-TSC-790-016. This exemption was previously approved by the



NRC by letter dated July 14, 2010, with the environmental assessment noticed in the *Federal Register* on June 15, 2010.

2. Appendix B, Section B.3.4.2.6. This exemption is from the requirement to maintain a coefficient of friction on the ISFSI pad surface of at least 0.5. This exemption was previously approved by the NRC by letter dated February 1, 2004, with the environmental assessment noticed in the *Federal Register* on January 30, 2004. The exemption was approved again by letter dated July 14, 2010, with the environmental assessment noticed in the *Federal Register* on June 15, 2010.

*Need for Proposed Action:* Maine Yankee has requested continuation of these exemptions so that it can register its casks to Amendment No. 6 to CoC No. 1015 for the NAC-UMS<sup>®</sup> System. The regulations in 10 CFR 72.212(b)(4) require the general licensee to register each cask with the NRC no later than 30 days after applying the changes authorized by an amended CoC.

*Environmental Impacts of the Action:* Amendment No. 6 to CoC No. 1015 has been previously evaluated by the NRC and its adoption by Maine Yankee presents no additional radiological environmental impacts. The two exemptions are related to sections in the technical specifications that were not revised as part of Amendment No. 6 to the CoC No. 1015 of the NAC-UMS<sup>®</sup> System. An environmental assessment for these two exemptions was conducted for the previous approvals, as noted above, and is summarized below.

The requested exemption from Appendix A, Section A.3.1.4, Canister Maximum Time in Transfer Cask” is an exemption from the requirement to comply with the 25-day requirement in Limiting Condition of Operation 3.1.4 for one canister, NAC-UMS-TSC-790-016. The affected storage canister had a heat load of 9.59kW, and was placed in a transfer cask for a total of 43 days between December 28, 2002, and February 18, 2003. At that time the Maine Yankee ISFSI operated under the provisions of CoC No. 1015,

Amendment No. 2, and the Limiting Condition of Operation 3.1.4 time limit for a canister having a content decay heat load of less than or equal to 14kW was unlimited. During this period, the storage canister was in full compliance with CoC No. 1015, Amendment No. 2, and its stored spent fuel was maintained in a safe condition during the time the canister was in the transfer cask. The transfer of the loaded canister was completed in a safe manner to ensure the transfer cask was not used as a long-term storage device.

The requested exemption from Appendix B, Section B.3.4.2.6 is an exemption from the requirement to maintain a coefficient of friction on the ISFSI pad surface of at least 0.5. As discussed in the *Federal Register* notice published on January 30, 2004, Maine Yankee requested the exemption to address winter icing conditions that could result in a reduced coefficient of friction between the vertical concrete cask and the ISFSI pad surface, and limited vertical concrete cask sliding during a design-basis earthquake. The NRC previously reviewed the evaluations provided by Maine Yankee and found reasonable assurance that the design-basis earthquake will not result in significant sliding of the NAC-UMS<sup>®</sup> System vertical concrete casks. The NRC evaluated the magnitude of the impact load between two colliding vertical concrete casks and determined that the impact load would be far less severe than that encountered in a tip-over accident for which the NAC-UMS<sup>®</sup> System has been demonstrated to be structurally adequate. The NRC determined that not maintaining a coefficient of friction between the vertical concrete cask and the ISFSI pad surface of at least 0.5 is consistent with the safety analyses previously evaluated for the NAC-UMS<sup>®</sup> System, would have no impact on the design basis, and would have no impact on off-site doses. Therefore, the NRC concluded that the requested changes would not pose an increased risk to public health and safety.

The NRC evaluated the impact to public safety that would result from the proposed action and determined that approval of the exemptions would not increase the probability or consequences of accidents, no changes would be made to the types of effluents released offsite, and there would be no increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the action. Additionally, the proposed action would not involve any construction or other ground disturbing activities, would not change the footprint of the existing ISFSI, and would have no other significant non-radiological impacts. The ISFSI is located on previously disturbed land so it is unlikely to create any significant impact on aquatic or terrestrial habitat in the vicinity of the plant or to threatened, endangered, or protected species under the Endangered Species Act, or to essential fish habitat covered by the Magnuson-Stevens Act. Approval of the exemptions is not the type of activity that has the potential to cause effects on historic or cultural properties, assuming such properties are present at the site.

*Alternative to the Proposed Action:* The alternative to the proposed action would be to deny approval of the exemptions. This alternative would also have no significant environmental impact. Since there is no significant environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact were not evaluated.

Given that there are no significant differences in environmental impact between the proposed action and the alternative considered, and that there are no changes in the conditions under which the exemptions were previously approved, the NRC concludes that the preferred alternative is to grant the exemptions.

### **Finding of No Significant Impact**

The environmental impacts of the exemptions were previously reviewed and determined to have no significant environmental impact. There have been no changes to the conditions under which the previous review was approved. Based upon the foregoing discussion and the previous approvals, the NRC finds that the exemptions will not significantly impact the quality of the human environment.

#### **IV. Availability of Documents**

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

<b>DOCUMENT</b>	<b>ADAMS ACCESSION NO. OR FEDERAL REGISTER CITATION</b>
NAC-UMS <sup>®</sup> System Certificate of Compliance No. 1015, effective November 20, 2000	ML090120408
Letter from J. Stanley Brown, P.E., Maine Yankee, dated January 21, 2019	ML19031B341
Letter from J. Stanley Brown, P.E., Maine Yankee, dated April 11, 2019	ML19112A024
Letter from J. Goshen, P.E., NRC, to J. Connell, Maine Yankee, dated July 14, 2010	ML101960072
<i>Federal Register</i> notice, "Issuance of Environmental Assessment and finding of No Significant Impact," dated June 15, 2010	75 FR 33853

Letter from L. Camper, NRC, to T. Williamson, Maine Yankee, dated January 4, 2005	ML050050209
<i>Federal Register</i> notice, "Maine Yankee Atomic Power Company, Maine Yankee Independent Spent Fuel Storage Installation, Issuance of Environmental Assessment and Finding of No Significant Impact," dated January 4, 2005	70 FR 396
Letter from L. Camper, NRC, to T. Williamson, Maine Yankee, dated February 1, 2004	ML040350797
<i>Federal Register</i> notice, "Maine Yankee Atomic Power Company, Maine Yankee Independent Spent Fuel Storage Installation, Issuance of Environmental Assessment and Finding of No Significant Impact for a Proposed Exemption," dated January 30, 2004	69 FR 4543
Letter from P.J. Dostie, Maine Department of Health and Human Services, to the NRC, dated January 29, 2019	ML19038A057

The NRC may post materials related to this document, including public comments, on the Federal rulemaking Web site at <https://www.regulations.gov> under Docket ID **NRC-2019-0116**. The Federal rulemaking Web site allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) Navigate to the docket folder (**NRC-2019-0116**); 2) click the "Sign up for E-mail Alerts" link; and 3)

enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

## **V. Conclusion**

Based on the above considerations, the NRC has determined that, pursuant to 10 CFR 72.7, the exemptions are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest. Therefore, the NRC grants the exemptions from the requirements of 10 CFR 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), 72.212(b)(11), and 72.214.

These exemptions are effective upon publication.

Dated at Rockville, Maryland, this 5<sup>th</sup> day of July, 2019.

For the Nuclear Regulatory Commission.

John B. McKirgan,  
Chief,  
Spent Fuel Licensing Branch,  
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[FR Doc. 2019-14711 Filed: 7/9/2019 8:45 am; Publication Date: 7/10/2019]